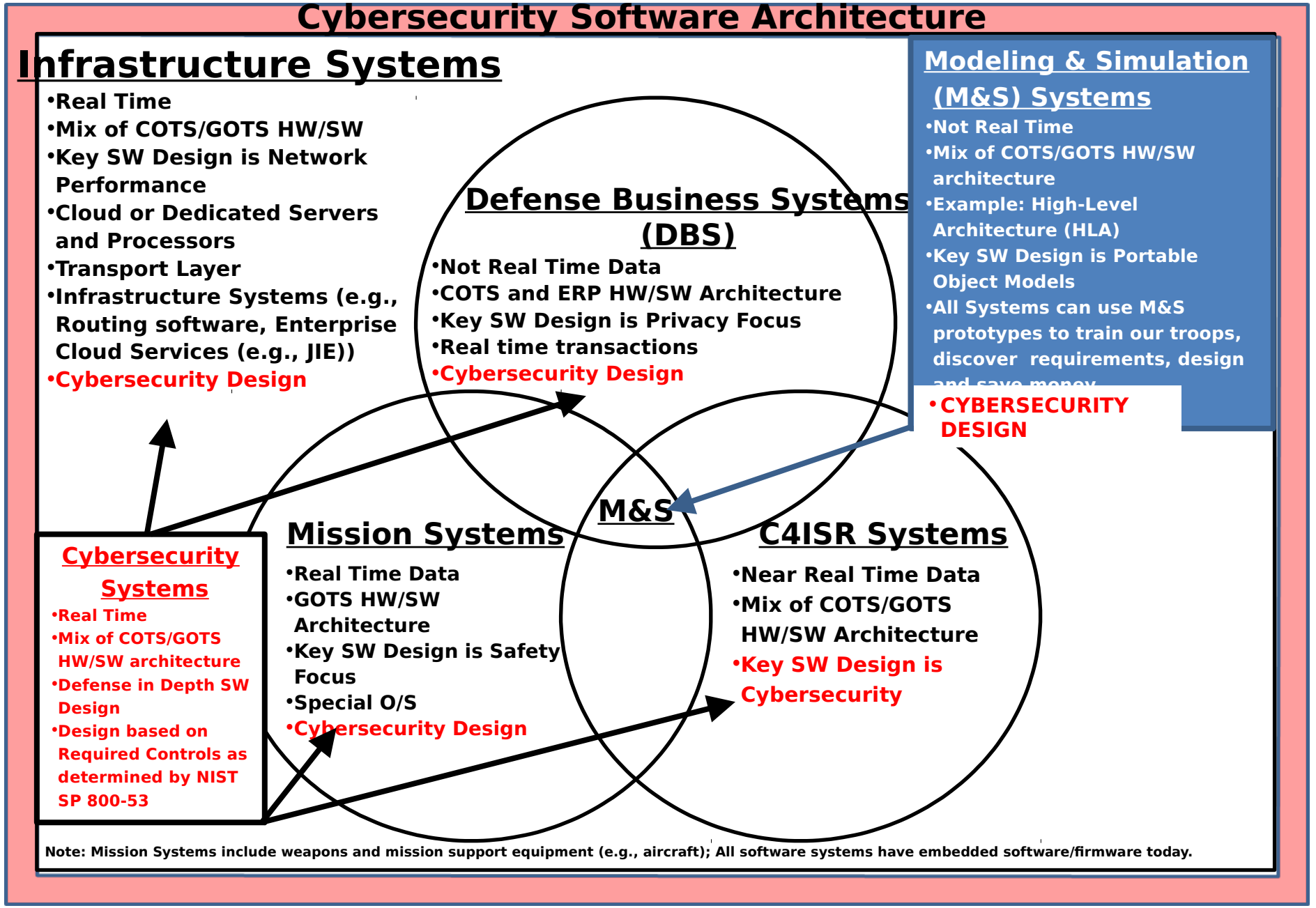
DoD Software Domains and their Impacts on SW Acquisition


Cybersecurity Software Architecture
Infrastructure Systems
•Real Time
•Mix of COTS/GOTS HW/SW
•Key SW Design is Network Performance
•Cloud or Dedicated Servers and Processors
•Transport Layer
•Infrastructure Systems (e.g., Routing software, Enterprise Cloud Services (e.g., JIE))
•Cybersecurity Design
Defense Business Systems (DBS)
•Not Real Time Data
•COTS and ERP HW/SW Architecture
•Key SW Design is Privacy Focus
•Real time transactions
•Cybersecurity Design
Modeling & Simulation (M&S) Systems
•Not Real Time
•Mix of COTS/GOTS HW/SW architecture
•Example: High-Level Architecture (HLA)
•Key SW Design is Portable Object Models
•All Systems can use M&S prototypes to train our troops, discover requirements, design and save money
•CYBERSECURITY DESIGN
M&S
Cybersecurity Systems
•Real Time
•Mix of COTS/GOTS HW/SW architecture
•Defense in Depth SW Design
•Design based on Required Controls as determined by NIST SP 800-53
Mission Systems
•Real Time Data
•GOTS HW/SW Architecture
•Key SW Design is Safety Focus
•Special O/S
•Cybersecurity Design
C4ISR Systems
•Near Real Time Data
•Mix of COTS/GOTS HW/SW Architecture
•Key SW Design is Cybersecurity
Note: Mission Systems include weapons and mission support equipment (e.g., aircraft); All software systems have embedded software/firmware today.